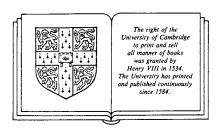
SOVIET PLANNING IN PEACE AND WAR 1938–1945

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Economic planning and the search for balance

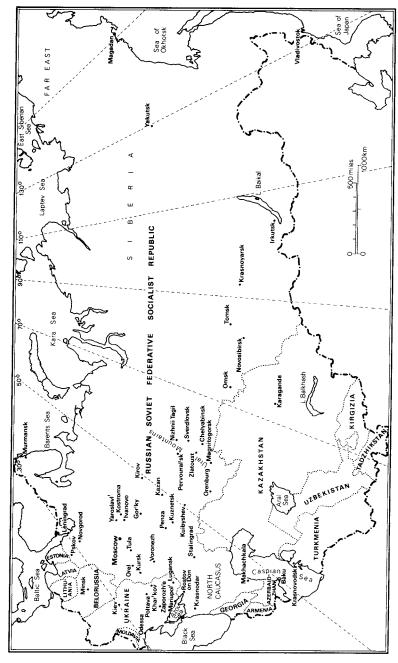
For us, for Bolsheviks, a Five Year plan is not something finalised and given once and for all. For us a Five Year Plan, like any plan, is only a plan adopted as a first approximation which we must refine, adapt and perfect in the light of local experience, in the light of experience of plan implementation . . . Only bureaucrats can suppose that the work of planning finishes with compilation of the plan. Plan compilation is only the beginning of planning. Real leadership in planning is revealed only after compilation of the plan, after checking up on the ground in the course of plan fulfilment, correction and refinement.

(General Secretary I. V. Stalin in a speech in June 1930)1

INTRODUCTION

To find out how Soviet economic planning was changed by the experience of the Second World War, we must first set out the system of economic planning which had been brought into being before the war broke out. But this is no easy matter. The most important difficulty is that Soviet planning before the war was not a fixed system, with unchanging rules and permanent institutions. Built into the system was the tendency of the system to change.

The prewar planning system did have certain permanent features – a basic structure of hierarchy, information and command – which had been laid down in the formative years of the first Five Year Plan (1928–32). However, this basic structure had not been created all at once according to a ready-made, fully formed model of a functioning socialist economy, although such system-building ideas played an indispensable part in the process. In fact the process of creating a planning system involved a period of bitter struggle between different schools of planning philosophy, and no less bitter clashes between the aspirations of economic policy and unpalatable economic realities. By the end of the formative period these clashes had been not so much



The Republics, major cities and other towns of the USSR 1938-45

finally resolved as suppressed or accommodated for the time being.² The planning system which resulted was not a logically coherent, smoothly functioning machine, but a working compromise.

At the heart of the compromise lay an unresolved conflict over the nature of economic planning. We can picture it as a conflict between two currents of planning philosophy and practice. One current saw economic planning as a law-governed process in which the authority of the plan, to be effective, must respect inherent limits. The other current rejected the idea of limits to the exercise of authority; it embraced a voluntaristic outlook and dictatorial methods of getting things done. The two currents also maintained quite opposed ideas about the purpose of planning. They agreed on the need for capital accumulation to bring about rapid economic development, but there the agreement stopped. The first current saw the plan as a means of guaranteeing in advance that the demands of accumulation would not disrupt social and economic equilibrium; capital construction would be limited to the real capacities of the economy, and would be adapted to the needs of household consumption and other determinants of social welfare. In direct conflict with this, the second current saw the plan not as a guarantee of economic and social equilibrium but as an instrument of mobilisation - of pouring resources into capital projects in order to get things done, regardless of the impact upon the economy's equilibrium or of the attendant sacrifices, exertions and wastes.3

Associated with the two currents were two alternative views of how the economic plan was related to political decisions. Within the framework of planning as a means of mobilisation, the primary role was to be played out by politicians and industrial bosses. It was their job to designate the key projects and priorities in the field of capital construction. The planners then faced the auxiliary task of working out the implications of these targets, handed down to them from above, for the industries supplying investment goods, for the workforce and for its consumer supplies and demands. Once the plan was under way, the planners' job was to follow its progress in order to safeguard the key sectors against shortfalls and bottlenecks arising elsewhere. But within the framework of planning as a means of securing social and economic equilibrium, the plan itself became the primary decision and the content of economic planning was enlarged. First the planners had to assess society's needs and resources and to establish which of the economy's possible expansion paths would be

consistent with principles of balance. Decisions about sectoral priorities could only be taken within this analytical context. Thus economic analysis and political leadership would be to some extent fused into a single process.

The history of the Stalinist economic system suggests that these two different plan concepts tended to alternate in practical importance. They were first clearly worked out in the struggle between the 'genetic' (balance) and 'teleological' (mobilisation) schools of planning in the period from 1926 to 1929.4 The immediate victor in this struggle was the teleological school, but the concepts developed by the genetic planners were repressed and modified rather than eliminated. The periodic supremacy of the mobilisation principles was facilitated by the Stalinist political system with its tendencies towards personal dictatorship and acts of political will. However, after each period of forced mobilisation we find a temporary adjustment phase, forced upon the political leaders by the need to repair damage caused by the shock waves of the investment mobilisation rippling through the economy. At such times the mobilisation simply exhausted itself and ground to a halt; then it became possible to voice the need for restored balance as a precondition of any further mobilisation.

It would be false to portray the two concepts of planning for balance and mobilisation as exclusively antagonistic. There was a sense in which they needed each other. They coexisted within the same economic system for good reason. Economic mobilisation, to be sustained over many years, had to respect certain rules, and these rules were to be found in the principles of balance. Securing economic balance could not be a completely pragmatic process, because the results of pragmatism and experiment had to be judged and acted on. 'Balance' principles were still being talked about and refined in the most violent years of Stalinist transformation. At the same time, in the context of the Stalinist political system, the 'balance' current was forced to share the same permanent objectives as the system as a whole. A state of harmony in the economy was never regarded as an end in itself, but only as a means towards some greater goal of socialisation or industrial growth. The attainment of harmony would be the signal for resumed mobilisation. Thus the compromise between balance and mobilisation was constantly under review. As a result it was not uncommon to find individual leaders at many levels of the apparatus visibly shifting from one current to another as the compromise altered and their perception of it changed. Of course

there were probably just as many who stuck loyally to their principles, although the gap between principles and behaviour might be very great.

The search for economic balance was always associated with institutional change in the planning system. The tendency of the system to change was inbuilt, in the sense that the need for change resulted directly from the functioning of the system itself. Economic planners tried to resolve the problems thrown up by the mobilisation drive by enhancing the position of the planning system in the central process for making political decisions. At the same time they sought to endow the planning system with more effective mechanisms of communication and control. However, the results of change were not predetermined. Just as each phase of Stalinist mobilisation revealed its own specific features (conditions, objectives, methods, duration etc.), the following adjustment phase did not follow a single pattern. On the contrary, in each period the evolution of the crisis and the changes introduced in response to it showed rich variety, building new features into the Soviet economic system and laying down new precedents for the future. Important changes were maturing in Soviet planning in the last prewar phase of crisis and adjustment, which falls within the years 1938-41. They form essential background to study of the response to the much greater crisis caused by the German invasion.

This chapter is divided into two parts. In the first we examine the factors conditioning the economic difficulties of the late 1930s and the state of economic planning. In the second part we look at the measures adopted to rebalance the economy and resume economic mobilisation, and the directions of change in central coordination of the economy.

PART ONE: A PLANNED ECONOMY IN CRISIS

ECONOMIC IMBALANCE IN THE PREWAR YEARS

Soviet industrial growth in the 1930s was rapid and highly uneven. Under the first Five Year Plan, from 1928 to 1932, the national income measured in constant 1928 prices grew by over 60 per cent. Associated with rapid expansion was rapid structural change – nearly all the increased output was accounted for by industry, construction

1928 1932 1940 1937 Crude steel, mn tons 18.3 17.7 4.3 5.9 Coal, mn tons 128.0 165.9 35.5 64.4 Electricity, bn kWh 48.3 36.2 13.5 5.0 Metal-cutting machine tools, thou. 48.5 58.4 2.0 19.7

8.0

23.9

199.9

145.4

Table 1. Soviet heavy industrial production 1928-40

Sources: See Appendix 2.

Motor vehicles, thou.

and transport while agriculture showed a tendency to stagnate or even decline. Moreover, almost all the increased output was reinvested, while consumption lagged far behind.⁵ Meanwhile the most dramatic upsurge, illustrated in Table 1, was recorded by heavy industry. But the upsurge broke in 1931–2, the signs of deceleration first appearing in the iron and steel industry and spreading via the metal-using sectors. This was the first crisis of excessive accumulation under Stalinist planning.

The main feature of this crisis was that the demands upon the economy had grown more rapidly than the economy was able to create new capacity to meet them. The drive to create new capacity itself added to the strain. Disruption spread to the point where the economy could no longer protect the supply of producer goods for capital construction; investment projects already begun could not be completed, and industry itself was starved of inputs. The volume of unfinished investment rose sharply, the expansion of new capacity slowed down, and the utilisation of existing capacity fell.

The crisis was resolved in 1933 by means of a thorough rationalisation of the investment balance. Total investment was cut back and investible resources were concentrated on unfinished capacity. For most of the second Five Year Plan period (1933–7), rapid growth was resumed in all sectors of heavy industry. The years 1934–6 saw more huge investments and climbing output levels. The backlog of unfinished investments left over from the first Five Year Plan period was eliminated, yielding rapid returns. Uncompleted construction rose less rapidly than the capital stock as a whole, and investment costs remained stable or fell. In 1937, however, signs of trouble reappeared; there was a sharp increase in the volume of unfinished investment, at the same time as total investment began to fall.⁶

Nineteen thirty-seven saw the beginning of a new crisis of excessive accumulation. Symptoms of control loss began to multiply. Underfulfilment of 1937 construction plans in heavy industry was combined with rising building costs. The building workforce grew faster than planned limits, while most building workers were undershooting their labour norms. In the economy as a whole plans for labour recruitment from the countryside to industry greatly exceeded forthcoming supplies. Lags in project completion once more became a topic of anxious discussion. Defects in investment management were the subject of a Sovnarkom resolution of 26 February 1938 which castigated the excessive ambitiousness of project evaluation staff and toleration of cost overruns by those in charge of subcontracting for construction work. 10

Industrial stagnation had first emerged in iron and steelmaking in the course of 1936, and the effects had travelled through the economy via the engineering industry and other metal-using branches. Behind the slowdown in iron and steel lay failures both of capital construction and of capacity utilisation. In 1936 a sharp decline in realised investment in the industry set in. 11 By the period of the third Five Year Plan (1938 to the first half of 1941), the rate of completion of new iron and steel capacity was running at less than half the rate of the previous Five Year Plan period - by the standards of 1933-7 the completion of new rolling capacity was down by more than 70 per cent. 12 By May 1940, of 124 planned projects in the industry, work was proceeding only on 41, and only 22 were in operating condition. 13 The failure of construction was matched by failures of utilisation. Between 1938 and 1940 new capacity was added to the industry, but output stagnated while the average productivity of blast furnaces and open hearth smelting capacity declined.14

An independent factor in the economy's overcommitment at this time was rearmament. Table 2 shows that by the end of the first Five Year Plan period Soviet industry was producing all types of modern weapons on a large scale, as well as more traditional military goods such as artillery and infantry armament. During the thirties there were two phases of extremely rapid growth of weapons output, 1930–3 and 1936–40, with a plateau in between. In both phases rapid growth in the volume of output was combined with active transformation of the technology of production and of the weapons themselves, especially for aircraft and armoured vehicles (for example a sharp dip in tank production in 1937 compared with 1936 marked a

	1930	1933	1936	1940
Aircraft	899	2,952	3,770	10,565
Tanks	170	3,509	4,800	2,794 ^a
Artillery pieces	952	4,368	4,324	15,300
Rifles and carbines, thou.	126	241	403	1,461

Table 2. Soviet arms production 1930-40

Sources: See Appendix 1.

switch away from light tanks to much more heavily armed, armoured and powered models). However, the sheer volume of output was still impressive by itself. Just comparing 1937 and 1939, the rates of production of aircraft, tanks, artillery, infantry armament and ammunition all doubled or trebled.

Rapid rearmament in the late thirties is still more impressive when it is remembered that at the same time the supporting basic and heavy industries were stagnating. If one looks at the economy as a whole, by 1940 military equipment narrowly defined took up 7 per cent of national income, and military subsistence another 4 per cent. Military needs more broadly defined increased the total drain on national income to 15 per cent. Military needs accounted for 26 per cent of industrial production, 16 per cent of transport services and 9 per cent of agriculture's produce in 1940. By June 1941 the armed forces had more than 5 million able bodies, while the manufacture of aircraft, armoured vehicles, armament, ammunition and naval construction employed an estimated 3 million workers, compared to a 1940 workforce in manufacturing industry as a whole of 13 million. 19

Rearmament had a substantial influence on the economy. Its impact on the pattern of industrial growth was primarily through preempting previously existing and newly created engineering capacity and supplies of metals and chemicals. As far as material supplies are concerned, in 1938 the arms industries were already being allocated a third of the available structural iron and steel, nearly a third of iron and steel for fabricating, and 42 per cent of high-grade rolled steel.²⁰ This allocation had been achieved by

^a In 1937 the Soviet tank industry went over from producing largely light tanks to medium and heavy tanks. The figure of 2,794 tanks produced in 1940 represented an 80 per cent increase over 1937.

converting the steel industry to high-grade products for defence needs and starving civilian industry of ferrous metals.

Rearmament also depended upon the conversion of existing engineering capacity both to full-time arms manufacture and to occasional defence contracts. Conversion of civilian capacity was especially important in so far as the economy's ability to lay down and complete new industrial capacity had fallen below expectations, so that the fixed capacity required for rapid increases in arms production (also largely unanticipated) had to be diverted from other uses. 21 In the prewar years substantial resources were being invested in converting and newly creating arms capacity – the arms industries themselves took over a quarter of all industrial investment between 1938 and the outbreak of war.²² If investment in heavy and light industry is reckoned at just over 35 per cent of total Soviet investment in the same period, 23 then the arms industries were accounting for about one-tenth of this total, and over 13 per cent in 1940 alone.24 However, the real increase in fixed capacity available for meeting defence orders was greater than would be implied just by looking at new investment, since civilian industry was being widely involved in a system of subcontracting for components and parts by the big specialised defence producers. 25 The cost to civilian consumption as well as investment must have been considerable - Bergson reckons the decline in household consumption per head between 1937 and 1940 at between 4.4 and 8.2 per cent, depending on the price weights used.²⁶ However, the cost to both was probably less than would have resulted from a greater insistence on plant specialisation, new capacity and independence of civilian suppliers for the arms industries.²⁷

Rearmament has been emphasised by Soviet historians as a decisive factor unbalancing the economy in the prewar years. ²⁸ At the same time rearmament must be placed in context. It would be wrong to blame prewar economic imbalances on the breakdown of international relations while downplaying the independent role of the economic system's responses to new demands. The economic system, faced with a rapidly changing environment, failed to adapt its priorities smoothly in order to safeguard the permanent objectives of economic development. Consequently initial responses to new demands, such as the rearmament bill, were often inappropriate. The list of priorities was expanded indiscriminately so that the whole economy was placed under intolerable strain. As a result priorities were sacrificed inevitably under the pressure of events, by accident

rather than by design. Thus investment goods for iron and steel were diverted to weapons production, but the result was to hamper the expansion of the whole complex of metal-producing and -using industries and to intensify the consumption sacrifices arising from rearmament.

The general effect of systemic responses to new demands was demoralising. For example a government commission, set up in the summer of 1939 to look into the causes of stagnation in the iron and steel industry,²⁹ reported a year later that the industry was pervaded by disorganisation. The latter affected fuel and ore supplies, labour discipline and morale, innovation and rationalisation, and supplying agencies.³⁰ We should hardly list these as direct costs of rearmament.

In this already complex situation a further independent factor was at work. Failures in investment coordination were condemned as the work of enemies and wreckers, unmasked by 'our famous Soviet intelligence service'.31 Purges swept through the planning and management apparatus. The devotion of excessive resources to grandiose projects, wishful thinking about investment costs and completion forecasts, shortages of inputs necessary for project completion, the commitment of additional investment resources to increase capacity in sectors constraining the completion of capacity elsewhere, the multiplication of projects far beyond the economy's capacity to supply them and the resulting unstoppable decline in the efficiency of investment - all these formed the substance of 'sabotage' allegations against the planners.³² The difficulties arising from overcommitment of the economy were thus used by the security organs to frame criminal charges against - and eventually eliminate - broad sections of industrial and economic officialdom. But in the process the difficulties themselves were compounded, and certainly did not disappear.

In summary, by 1937 the Soviet economy had entered a new overinvestment crisis. This crisis was the compound result of three independent processes. The first was the piling up of unfinished investment projects resulting from the investment mobilisation pursued since 1934. During 1936 the second process, rapid rearmament, was resumed. By now the economy was overcommitted and the efficiency of capacity construction and utilisation was falling. Initial responses to the unfolding economic crisis ranged from the uncontrolled multiplication of priorities, although the economy was unable to meet existing targets, to the repression of those held responsible for failure to meet targets which had either been infeasible in the first

place or had been rendered infeasible by changing circumstances. Thus the purges and repressions of 1936–8 were the third process contributing to the economic crisis.

THE ADMINISTRATIVE CONTEXT

Connected with the process of purging the economic apparatus was its reorganisation. This proceeded along two main dimensions. One was the break-up of the administrative empires created by the first Stalinist generation of industrial leaders, especially G. K. Ordzhonikidze at the People's Commissariat for Heavy Industry. The other was the upward movement of the next generation into the positions vacated by their predecessors and into the new positions created by an extending apparatus composed of a growing number of little empires.

At the time the fragmentation of the economic apparatus was explained in terms of the growing scale and increased complexity of the economy, and the growing distance between the shop floor and the highest levels of such super-large bureaucracies as the heavy industry commissariat.33 Undoubtedly these factors had played their part in the developing control loss of the late thirties. However, the subdivision of commissariats and turnover of leading personnel proceeded far more rapidly than an orderly process of bureaucratic response to economic change would suggest. Between December 1936 and June 1941 Ordzhonikidze's old empire was split into no fewer than seventeen separate industrial branches. The first moves in this direction, and the purging of his subordinates, contributed to Ordzhonikidze's suicide in February 1937.34 The most rapid fragmentation, however, occurred in 1938 and 1939.35 Other commissariats were also affected by subdivision, and one or two new commissariats were also set up. In January 1938 there had been twenty-one USSR People's Commissars; by the outbreak of the war there were as many as forty-three. At the same time all but three of the original twentyone had lost their jobs (one of the three had merely been transferred), so virtually all of the full commissars of June 1941 were new to work at this level of the apparatus.³⁶ Such turnover, far in excess of that required by normal processes of career movement and recruitment to existing and new posts, characterised the apparatus at lower levels as well.

These reorganisations had substantial implications for the func-

tioning of the economic system which will be considered at a later point. Here they are of interest as a symptom of the state of Soviet administration at the time. They suggest that in the late thirties the basic structures of the economic apparatus had been destabilised; formal chains of communication, authority and responsibility had lost what validity and clarity they had previously possessed, and instead showed a tendency to shift and overlap. Corresponding to the lack of authority of stable, bureaucratic relationships was the increased role of competition among personal administrative factions for priority in the allocation system, and the resort by higher-level leaders to informal and extra-legal methods of solving disputes and repressing problems at lower levels.

This style of administration has sometimes been called 'shapeless'. ³⁷ I hesitate to apply it as a defining term to the whole period of Stalinist administration, but it undoubtedly describes a recurring aspect. Moreover it has been suggested that 'shapelessness' in administration often carries important penalties. These have been found to include difficulties in statistical data collection, information processing and decision making where these require inter-agency collaboration and the crossing of departmental boundaries. Those below the system's summit can rarely form a coherent picture of the context within which they must act; loss of morale and initiative are the characteristic effects. The quality of decision making at all levels depends to a high degree upon the qualities of leading individuals. ³⁸

Fragmentation of the industrial apparatus in the late thirties was recognised to have weakened central coordination of inter-industry supply and increased the range of problems which each commissariat would be unable to solve by itself. ³⁹ Consequently greater importance than before would fall to those central party and government organs with direct responsibility for aggregating information, integrating conflicts of interest and ensuring the coherence of decision making at all levels from the point of view of the balance of the national economy. However, these central organs were subject to the same destabilising processes as the rest of the administrative apparatus and encountered the same penalties listed above. Their functioning too was dominated by the personal qualities of their leaders.

During the late thirties USSR Gosplan and its leadership were thoroughly 'turned over'. During the decade the central staff and lower planning organs had grown rapidly and recruited widely, but employment in planning offered poor conditions and low status, so that there was already a background of high turnover rates.⁴⁰ The turnover of staff was greatly accelerated between the spring of 1937 and the end of that year, when the central staff was 'completely renewed',⁴¹ its experienced and technically qualified core being eliminated in the Great Terror.⁴²

The need to restore the authority and effectiveness of the central economic organs was now expressed in two preliminary measures. ⁴³ First was the creation on 23 November 1937 of a permanent Sovnarkom subcommittee, the Economic Council, composed of the Sovnarkom chairman and his deputies and the head of the Soviet trade unions. The Economic Council was to take governmental responsibility for inspection and confirmation of the central planning and management process and for supervision of economic performance, and was endowed with a number of delegated powers. ⁴⁴ Its effectiveness would clearly depend above all upon the proper functioning of the planning organs. The second measure, therefore, was to be the renewal of the Gosplan leadership, staff and charter.

THE RISE OF VOZNESENSKY

It was against this unhappy background that N. A. Voznesensky took over as chief of USSR Gosplan on 19 January 1938. He was only thirty-four years old. His team, like him, was also young and mainly of recent appointment – highly qualified in political and educational terms, but lacking practical experience of the planning and management routine.⁴⁵

Voznesensky was already an outstanding representative of the younger generation of Stalinist cadres. Of provincial Russian origin, he had joined the Bolshevik party as a young manual worker and political activist in 1919. Study of political economy and philosophy at party school in Moscow had been followed by an apprenticeship in local and industrial party work in the coal and steel towns of the Donbass. During the 1920s Voznesensky proved a reliable supporter of the Stalinist general line. But this was not his only asset. He also displayed original intellectual and leadership qualities. His reward was admission to the economics section of the Institute of Red Professors in Moscow in 1928. There he studied and subsequently taught political economy. 46

In the early and middle thirties Voznesensky made an important contribution to analysis of the results of Stalinist economic policy. How was the turmoil resulting from the first great investment mobilisation of 1928–32 to be understood and resolved? How could the newly centralised system of authoritarian economic planning be made more effective, more adaptable to reality and more sensitive to its own results? Voznesensky's early writings, published between 1931 and 1936, may give us some insight into his perception of the problems of 1938.

In 1931–2 Voznesensky wavered between the imperatives of mobilisation and adjustment. For example during 1931 he argued for sticking to and attaining inflated plan targets for expansion of the basic industries, when others were already advocating their downward revision. He described the plan as 'an economic law of the Soviet economy, formulated by the proletarian state' and the task of planning as one of struggling to enforce target fulfilment against the disruptive influence of market shortfalls. 47 At the same time Voznesensky distanced himself from those who were seeking to resolve the economic difficulties resulting from investment mobilisation by means of immediate transition to a moneyless economic system ruled exclusively by decrees handed down from above. Thus he identified himself with the spring 1931 return to profit and cost accounting in state enterprises and material incentives for producers based on reductions in production costs. He argued that, while higher-level output targets should be the prime determinant of management objectives, a subordinate but still essential discipline should be the monitoring of production costs and their minimisation, stimulated from below. This would enhance central authority, because it would break the association between ambitious higher-level output targets and lower-level cost inflation. He affirmed this as marking a transition from the initial act of 'nationalisation' of capital to its 'socialisation', i.e. bringing it under true social control.⁴⁸

Voznesensky saw these issues as connected with the role of money and the market in a socialist economy. He was against the immediate abolition of money, but in favour of its gradual elimination as a fully socialist economy was achieved. He thought that in a fully socialist economy there would still be accounting of costs and surpluses, but in non-monetary terms. In this field he thought that the way forward would be found among the various radical experiments of the time in non-monetary cost accounting. For the time being, however, money and trade were necessary evils inherited from the capitalist economic system, to be tolerated and even used as temporary expedients. 49